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<110> Donovan, Stephen

<120> CLOSTRIDIAL TOXIN DERIVATIVES AND METHODS FOR TREATING PAIN

<130> botulinum-subP/pain/D2875

<140> 09/489,667

<141> 2000-01-19

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<170> PatentIn Ver. 2.1

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<213> Unknown Organism

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<221> MOD_RES

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<223> AMIDATION

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<223> Description of Unknown Organism: This fragment is substance P and is very well known in the art.

<220>

<223> The Met at position 11 is Met-amide.

<300>

<310> 5891842

<311> 1996-04-12

<312> 1999-04-06

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Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met

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<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Precursor to
substance P, which is very well known in the art.

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<311> 1996-04-12
<312> 1999-04-06

<300>
<301> Shimonka,
et al.,
<303> J. Neurochem.
<304> 59
<306> 81-92
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<223> Description of Unknown Organism: This fragment is
a precursor to substance P and is very well known
in the art.

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<301> Shimonka,
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<304> 59
<306> 81-92
<307> 1992

<400> 3
Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys
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<210> 4
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<223> Description of Unknown Organism: This fragment is a
precursor to substance P and is very well known in
the art.

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<304> 59
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<307> 1992

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Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys Arg
1 5 10

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<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: This fragment is a carboxy-ester synthetic precursor to substance P.

<220>

<223> The Gly at the carboxy terminal (Gly at position 12) is methylated.

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<310> 5891842

<311> 1996-04-12

<312> 1999-04-06

<300>

<301> Lee,
et al.,

<303> Eur. J. Biochem.

<304> 114

<306> 315-327

<307> 1981

<300>

<301> Pernow, B.

<303> Pharmacol. Rev.

<304> 35

<306> 86-138

<307> 1983

<300>

<301> Regoli,
et al.,

<303> TIPS

<304> 9

<306> 290-295

<307> 1988

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Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly

1

5

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carboxy ester synthetic precursor to substance P.

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13) is methylated.

<300>
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<301> Lee,
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<303> Eur. J. Biochem.
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<303> Pharmacol. Rev.
<304> 35
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<307> 1988

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Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys

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5

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<223> Description of Artificial Sequence: This is a
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<223> The Arg at the carboxy-terminus (Arg at position
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<300>

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<311> 1996-04-12

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<303> Pharmacol. Rev.

<304> 35

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<301> Regoli,
et al.,

<303> TIPS

<304> 9

<306> 290-295

<307> 1988

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Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys Arg
1 5 10

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<211> 12

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<223> Description of Artificial Sequence: This is a
carboxy ester synthetic precursor to substance P.

<220>

<223> The Gly at the carboxy terminal (Gly at position
12) is ethylated.

<300>

<310> 5891842

<311> 1996-04-12

<312> 1999-04-06

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<301> Lee,
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<303> Eur. J. Biochem.

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<303> Pharmacol. Rev.

<304> 35

<306> 86-138

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<301> Regoli,
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<303> TIPS

<304> 9

<306> 290-295

<307> 1988

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Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly

1

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<210> 9

<211> 13

<212> PRT

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<220>

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carboxy ester synthetic precursor to substance P.

<220>

<223> The Lys at the carboxy terminal (Lys at position
13) is ethylated.

<300>

<310> 5891842

<311> 1996-04-12

<312> 1999-04-06

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<301> Lee,

et al.,

<303> Eur. J. Biochem.

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<303> Pharmacol. Rev.

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<301> Regoli,

et al.,
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<306> 290-295
<307> 1988

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Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys
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<210> 10
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carboxy ester synthetic precursor to substance P.

<220>
<223> The Arg at the carboxy terminal (Arg at position
14) is ethylated.

<300>
<310> 5891842
<311> 1996-04-12
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<301> Lee,
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<304> 114
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<304> 9

<306> 290-295

<307> 1988

<400> 10

Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys Arg

1

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10

<210> 11

<211> 4

<212> PRT

<213> Unknown Organism

<220>

<223> This sequence is made up by the first four amino
acids of substance P.

<220>

<223> Description of Unknown Organism: This is a
naturally occurring amino terminal peptide fragment
derived from substance P.

<300>

<310> 5891842

<311> 1996-04-12

<312> 1999-04-06

<300>

<301> Stewart,
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<303> Nature

<304> 262

<306> 784-785

<307> 1986

<300>

<301> Skilling,
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<303> J. Neurosci.

<304> 10

<306> 309-1318

<307> 1990

<400> 11

Arg Pro Lys Pro

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<210> 12

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<212> PRT

<213> Unknown Organism

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<223> Description of Unknown Organism: This is a
naturally occurring amino terminal peptide fragment
derived from substance P.

<220>

<223> This fragment is made up of the first seven amino
acids of substance P.

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<301> Stewart,
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<301> Skilling,
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<303> J. Neurosci.

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<301> Lavielle,

et al.,

<303> Biochem. Pharmacol.

<304> 37

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<307> 1988

<400> 12

Arg Pro Lys Pro Gln Gln Phe

1

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<212> PRT

<213> Unknown Organism

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<223> Description of Unknown Organism: This is a
naturally occurring amino terminal peptide fragment
derived from substance P.

<220>

<223> This fragment is made up of the first nine amino
acids of substance P.

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<301> Stewart,

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<304> 262

<306> 784-785

<307> 1986

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<301> Skilling,
et al.,
<303> J. Neurosci.
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<306> 309-1318
<307> 1990

<400> 13
Arg Pro Lys Pro Gln Gln Phe Phe Gly
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: This is an
analog of substance P. This analog contains
disulfide Cys-Cys bridges.

<220>
<223> The Cys at position 3 bridges with the Cys at
position 6.

<220>
<221> MOD_RES
<222> (11)
<223> AMIDATION

<220>
<223> The Met at position 11 is Met-amide.

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<312> 1999-04-06

<300>
<301> Lavielle,
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<303> Biochem. Pharmacol.

<304> 37
<306> 41-
<307> 1988

<300>
<301> Quirion, R.
 Dam, T.V.
<303> Regulatory Peptides
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<306> 18-
<307> 1988

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